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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/970,679	10/05/2001	Bernard Gelloz	Q66527	1846

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EXAMINER

MAYO III, WILLIAM H

ART UNIT

PAPER NUMBER

2831

DATE MAILED: 01/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/970,679	GELLOZ ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	William H. Mayo III	2831	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 November 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some    \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thuries (Pat Num 5,089,665) in view of Floessel et al (Pat Num 3,916,081). Thuries discloses a gas insulated multi-phase lines (Figs 1-11) being surrounded by a metal enclosure thereby creating a gas tight enclosure (Col 1, lines 5-8). Specifically, Thuries discloses a gas insulated line (Fig 8) made up of sections (201 & 301) wherein each section (201 & 301) is formed by metal cladding (i.e. aluminum sheath Col 5, lines 25-33) filled with dielectric gas under pressure (Col 5, lines 45-50) and may contain at

least three conductors (as shown in Fig 11), wherein the two adjacent sections (201 & 301) are connected together by a connection module (302 & 303), whose metal claddings are locally made up of a plurality of tubular portions (302 & 303), that are each filled up with dielectric gas (Cols 5 & 6, lines 65-68 & 1-5) and has a conductor (221 & 222) passing through the tubular portions (Fig 8) constituting a passive electrical connection (Col 6, lines 29-30). With respect to claim 2, Thuries discloses that the connection module (302 & 303) is open at both ends so that the volumes of the sections (201 & 301) communicate with each other (Fig 8). With respect to claim 3, Thuries discloses that the connection module (302 & 303) may be closed in a gastight manner by one or more insulators (320) at either or both of it's ends (Fig 8) so as to isolate two adjacent sections (201 & 301) from each other and to isolate the module (302 & 303) from the sections (201 & 301, Col 6, lines 1-11). With respect to claim 4, Thuries discloses that the connection module (302 & 303) has a metal cladding made up of a first dish-shaped end cap (at 302) and of a second dish shaped end cap (at 303), wherein the caps (at 302 & 303) are provided with orifices of apertures (where the conductors 221 & 222 passes through) determined to enable the conductor (221 & 222) to pass through them with sufficient isolation distance from the cladding (at 302 & 303), and wherein each tubular portion of the connection module (302 & 303) is formed of a link tube (313 & 307) surrounding the orifice in the first end cap and the orifice of the second end cap (10), through which the conductor (221 & 222) passes (Fig 8). With respect to claim 5, Thuries discloses that the connection module (302 & 303') is extended by the link tubes (313 & 307) thereby forming an integrally molded single

piece therewith (Fig 8). With respect to claim 6, Thuries discloses that the tubular portions are mutually parallel (Fig 8). With respect to claim 8, Thuries discloses that each of the tubular portions are surrounded by gas (Col 6, lines 1-10). With respect to claim 10, Thuries discloses that the connection module (302 & 303) may have sensors disposed in the air in the vicinity of the tubular portions (317, i.e. service module, Col 5, lines 65-68). With respect to claim 12, Thuries discloses a gas-insulated line, wherein the connection module comprises a connection module (302 & 303) having a metal cladding made up of a first dish-shaped end cap (at 302) and of a second dish shaped end cap (at 303), wherein the caps (at 302 & 303) are provided with orifices of apertures (where the conductors 221 & 222 passes through) determined to enable the conductor (221 & 222).

Thuries doesn't necessarily disclose the conductor being a multi-phase conductor disposed in a triangular configuration (claim 1), nor the three tubular portions being disposed in an equilateral triangle (claims 7 & 12).

Floessel teaches multi-phase lines (Figs 2-3) comprising three conductors (3R, 3S, 3T). Specifically, with respect to claims 1 & 7, Floessel teaches that the three conductors (3R, 3S, 3T) are disposed in three tubes (Figs 2a-2b) spaced from each other by springs (2) that are spaced from each other by  $120^\circ$  (Col 2, lines 20-30), thereby forming a equilateral triangle.

With respect to claims 1, 7, & 12, it would have been obvious to one having ordinary skill in the art of cables at the time the invention was made to modify the three conductors of Thuries to comprise the conductors being spaced from each other by

Art Unit: 2831

120° as taught by Floessel, since it has been held that a change in form cannot sustain patentability where involved is only extended application of obvious attributes from a prior art. *In re Span-Deck Inc. vs. Fab-Con Inc.* (CA 8, 1982) 215 USPQ 835.

4. Claims 9 & 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thuries (Pat Num 5,089,665) in view of Floessel et al (Pat Num 3,916,081, herein referred to as modified Thuries), as applied to claims 1 & 4 above, further in view of Applicant Own Admission (herein referred to as AOA). Modified Thuries discloses a gas insulated multi-phase lines (Figs 1-11) being surrounded by a metal enclosure thereby creating a gas tight enclosure (Col 1, lines 5-8).

However, modified Thuries doesn't necessarily disclose the winding of secondary of the current transformer disposed in the air (claim 9), nor the method in which the winding is first put in place around a tubular portion before the two end caps are assembled (claim 11).

AOA teaches that gas insulated lines commonly comprise multi-phase conductors (see Page 1, lines 1-26 of Applicant's specification). Specifically, with respect to claim 1, 9, and 11, AOA teaches that gas insulated lines commonly comprise multi-phase conductors made up of sections having orifices at sufficient distances for each other and having windings that form secondary of the transformer being disposed around phase conductors which are disclosed in tubular metal claddings filled with gas under pressure, wherein the winding is put in place around the tubular portion (Page 1, lines 5-15 of specification).

With respect to claims 1, 9, and 11, It would have been obvious to one having ordinary skill in the art of cables at the time the invention was made to modify the gas insulated line of modified Thuries to comprise the multi-conductor configuration as taught by AOA because AOA teaches that such a configuration is commonly utilized as a gas insulated line (see Page 1, lines 5-26 of specification).

### ***Response to Arguments***

5. Applicant's arguments filed November 13, 2003 have been fully considered but they are not persuasive. Specifically, the applicant argues the following:

- A) Thuries contains only a single conductor and therefore fails to illustrate a metal cladding containing at least three phase conductors.
- B) Floessel doesn't teach the conductors being spaced apart from each other by 120°, but rather the leaf springs being separated at 120° and since there is no correlation between the configuration of the leaf springs and the configuration of the conductors, Floessel fails to teach the conductors being spaced apart from each other by 120°.
- C) One of ordinary skill in the art would not be motivated to space the conductors 120° apart because Thuries teaches away for doing such.

With respect to argument A, the examiner respectfully traverses. While Thuries illustrates one conductor being shown in Figure 3, this is for illustrative purposes to shown the surrounding elements of each phase conductor. Specifically, as detailed in the Brief Description of the Drawings "Fig 3 is a perspective view of a part of a length of

one phase of the line". Clearly, Thuries is concerned with multi-phase conductors (see specification and claims) and illustrates that the gas insulated cladding may comprise three phase conductors as illustrated in Figure 11, which as Thuries discloses

"...contains three phase conductors (11, 12, 13), surrounded by it's own aluminum sheath (21, 22, 23), wherein all of the aluminum sheaths are together surrounded by a common gas tight sheath (25)".

Therefore, Thuries clearly illustrates a multi-phase metal clad line having a common cladding (25) surrounding three phase conductors (11, 12, 13). In light of this, the examiner respectfully submits that this aspect of the claims is taught by Thuries.

With respect to arguments B & C, the examiner respectfully traverses. While the applicant is correct in stating the leaf springs as spaced  $120^{\circ}$ , the examiner respectfully submits that the leaf springs are part of the carrier rings, which within are inserted the phase conductors and supported by means of pin type insulators (Col 2, lines 8-14). Therefore, if the leaf springs are spaced by  $120^{\circ}$ , the phase conductors which are inserted into the carrier rings are also spaced by  $120^{\circ}$ . However, hypothetically speaking, even if Floessel didn't teach the phase conductors being spaced at  $120^{\circ}$ , the courts have been consistent that a change in form cannot sustain patentability where involved is only extended application of obvious attributes from a prior art. *In re Span-Deck Inc. vs. Fab-Con Inc.* (CA 8, 1982) 215 USPQ 835. Clearly, such a configuration is known in the art of gas insulated electrical lines. Specifically, there are hundreds of prior art reference that disclose such a configuration, such as Thuries et al (Pat Num 5,571,989)



and Cookson (Pat Num 4,110,551). Clearly, the spacing the gas insulated conductors is a engineering design choice of the engineer designing the cable. While, spacing of the conductors in a communications cable, is very germane to the overall characteristics and properties of the cable, in a gas insulated line, having three phases of conductors of supplying 360V of alternating current, spacing and arrangement is just a matter of design choice. The courts have also been consistent that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70. Therefore, the examiner respectfully traverses that 35 USC 103(a) rejection of the above claims, is proper and just.

### ***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 2831


the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

***Communication***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Mayo III whose telephone number is (703) 306-9061. The examiner can normally be reached on M-F 8:30am-6:00 pm (alternate Fridays off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on (703) 308-3682. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3432 for regular communications and (703) 305-3431 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

  
WHM III  
January 12, 2004